

CLAIMS

1. A spray device comprising projection means to generate a fluid spray
5 projection through a passage, a spray stem axially aligned within the passage to
allow removal through an end of the passage. The stem including isolation
means such that, when aligned, respective feed ports in the passage are isolated
from one another and thereby fluid for the fluid spray projection may pass
through at least one such feed port into the spray stem for spray projection out of
10 a nozzle of the stem.
2. A device as claimed in claim 1 wherein the isolation means comprises O
ring seals about the stem.
- 15 3. A device as claimed in claim 2 wherein the O ring seals are secured within
grooves formed in the stem.
4. A device as claimed in any of claims 1, 2 or 3 wherein spacing between
the isolation means defines an acceptable tolerance band width for association
20 with respective feed ports of the device.
5. A device as claimed in any preceding claim wherein the feed ports
communicate with circumferential channels formed in the stem.
- 25 6. A device as claimed in claim 5 wherein these circumferential channels
include sink apertures connected to a jet.
7. A device as claimed in claim 6 wherein the jet directly leads to the nozzle
and incorporates at least part of the means to generate a fluid spray projection.
- 30 8. A device as claimed in any preceding claim wherein the project means
includes a piston.

9. A device as claimed in claim 8 wherein this piston is electrically vibrated in order to stimulate spray projection.

5 10. A device as claimed in claim 8 or claim 9 wherein the piston is axially removable from the spray stem either with the spray stem from the passage or independently.

11. A device as claimed in any preceding claim wherein the spray stem and
10 the passage are a close fit.

12. A device as claimed in any preceding claim wherein the spray stem and passage have reciprocal tapered or conical shaping.

15 13. A device as claimed in any preceding claim wherein the spray stem is secured to the passage at the end of the passage.

14. A device as claimed in any preceding claim wherein the stem is secured to the passage through a screw thread engagement or bayonet fitting or using a
20 retaining screw.

15. A device as claimed in any preceding claim wherein the spray stem is made from a plastics material.

25 16. A spray device substantially as hereinbefore described with reference to Figs. 1 to 4 or 5 to 7 of the accompanying drawings.

17. A spray arrangement in which a spray propulsion section is secured to a fluid container in order to generate through vibration action propulsion of a fluid
30 spray through a tube conduit to a spray nozzle which may be held remotely from the spray proportion section.

18. An arrangement as claimed in claim 17 wherein the spray propulsion

section includes a vibrator and a pump mechanism to propel fluid through the tube conduit to the spray head nozzle 11.

5 19. An arrangement as claimed in claim 17 or claim 18 wherein an operating switch for the arrangement is located upon the spray propulsion section.

20. An arrangement as claimed in any of claims 17, 18 or 19 wherein a wireless switch is attached to a handle of the nozzle in order to allow remote
10 control of the spray propulsion section.

21. An arrangement as claimed in any of claims 17 to 19 wherein the spray head nozzle is readily detached from the tube conduit for cleaning or disposal.

15 22. A spray device arrangement substantially as hereinbefore described with reference to Figs. 5 to 7 of the accompanying drawings.

23. A tool for providing access to a fluid container incorporating a spike at one end in order to create an aperture upon which a spray propulsion section of an
20 arrangement as claimed in any of claims 16 to 22 can be secured.

24. A tool substantially as hereinbefore described with reference to Fig. 6 of the accompanying drawings.

25 25. A fluid container incorporating reciprocal flange elements to accept a spray propulsion section of an arrangement as claimed in any of claims 16 to 22 such that pressurisation of that container is readily achieved for propulsion of fluid retained within the container.

30 26. A fluid container substantially as hereinbefore described with reference to Fig. 7 of the accompanying drawings.

27. Any novel subject matter or combination including novel subject matter

disclosed herein, whether or not within the scope of or relating to the same invention as any of the preceding claims.